

## Joshi Deepak

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**From:** FOSTAIRE@aol.com  
**Sent:** Monday, January 03, 2005 4:40 PM  
**To:** Joshi Deepak  
**Subject:** 49 CFR Part 830 NPRM

Deepak Joshi  
Lead Aerospace Engineer  
NTSB  
Room 5235  
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Washington, DC 20594

Dear Mr. Deepak:

I would like to respond to the NPRM of 49 CFR Part 830.

I own and operate helicopters in the united states, and have had the opportunity to see many accidents resulting in a wide variety of aircraft and occupant damage/injuries.

In your opinion regarding the removal of ground damage to helicopter rotor blades from the list of exclusions, I would like to offer a different view, or views.

1. The rotor blades of helicopters are not like the wings of airplanes in more ways than they are alike.

Similarity: As stated, rotor blades do produce lift like wings of airplanes, but they are far from equivalent.

Dissimilar:

- a. Rotor blades are not part of the aircraft primary structure.
- b. Rotor blades do not contain sub systems like wings. Some of these may be,
  - i. fuel tanks and plumbing
  - ii. landing gear systems
  - iii. Flight control systems
  - iv. Powerplant installations
  - v. lighting systems
- c. Rotor blades can be replaced as simple parts, not complex assemblies with sub assemblies which wings have.
- d. Rotor blades can sustain ground damage without the aircraft sustaining "substantial damage" in the very same way as propellers of airplanes do. They then are replaced in a similar part replacement procedure much like a propeller. Wings certainly are not similar in this matter.

The statement "Any damage to main or tail rotor blades—regardless of how it occurs— will likely adversely affect the performance of the aircraft and, if so, should be considered substantial damage." does not make sense to me in the context that am I to assume propeller damage does NOT affect the airplane performance?

Of course rotor blade damage does affect helicopter performance. It is however like a damaged prop, blown tire, cracked window, or engine malfunction. It is a condition that requires maintenance to return the aircraft to service, not a rebuild of the primary structure, or any subsystems.

Helicopters, like airplanes do receive substantial damage at times, however ground damage to rotor blades is not always substantial damage unless the rotor blade damage was done as the aircraft was impacting the earth resulting in landing gear collapse and primary structure damage concurrent with the rotor blade damage.

Sincerely,  
Clarke Thomas  
President  
Fostaire Helicopters

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